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(54) CARBON/GRAPHITE COMPOSITE MOLDING

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a composite molding useful for a separator plate of a solid high polymer type and a phosphate type fuel cell by molding, precisely working and carbonizing a fine particle mixture consisting essentially of a carboneceous carbon compound fine particle having self-sintering property and a graphite carbon fine particle.

SOLUTION: The homogeneously mixed powder is obtained by drying, dehydrating and stirring to mix the fine particle consisting essentially of 10-50 pts.wt. carboneceous carbon compound having self-sintering property at the time of carbonizing and ≥10 μm average particle diameter and 90-50 pts.wt. graphite carbon fine particle having 10-70 μm average particle diameter. An aq. solution containing a particle mutual bonding additive (polyethylene glycol) selected from water soluble compounds having adhesive property is added into the mixed powder and mixed and granulated to form a granulated body having ≤0.5 mm max. particle diameter and molded by a molding machine such as a uniaxial press. The carbon/graphite combined molding is produced by precisely machining the resultant green molding into a high accuracy complicated shape and firing at 1100-1800°C under a non-oxygen atmosphere to carbonize.